

REMARKS

The Office action mailed on 13 January 2004 (Paper No. 0104) has been carefully considered.

The specification and Abstract are being amended to correct minor errors and improve form. Claims 1 thru 31 are being amended, and claims 34 and 35 are being added. Thus, claims 1 thru 35 are pending in the application.

In paragraph 1 of the Office action, the Examiner has imposed a restriction under 35 U.S.C. § 121 between:

- Group I claims 1-31, drawn to a filter, classified in class 313, subclass 466; and
- Group II claims 32, 33, drawn to a method of manufacturing, classified in class 427, subclass 164.

Applicant's undersigned attorney respectfully traverses the restriction requirement on the grounds that it is being imposed merely for the administrative convenience of the Patent & Trademark Office, a practice which was indicated by a previous Commissioner of Patents and Trademarks to be an improper basis for imposing a restriction requirement. Nevertheless, Applicant through the undersigned attorney provisionally elects Group I

(claims 1-31) with traverse, as stated in the telephone conference with the Examiner on 9 May 2003.

In paragraph 7 of the Office action, the Examiner rejected claims 1 thru 4 and 6 thru 9 under 35 U.S.C. §102 for alleged anticipation by Hanak, U.S. Patent No. 4,157,215. In paragraph 8 of the Office action, the Examiner rejected claims 9 and 13-17 under 35 U.S.C. §102 for alleged anticipation by Chigusa, European Patent Application No. 0 890 974 A1. In paragraph 10 of the Office action, the Examiner rejected claim 5 under 35 U.S.C. §103 for alleged unpatentability over Hanak '215. In paragraph 12 of the Office action, the Examiner rejected claims 9-12 under the judicially created doctrine of obviousness-type double patenting for alleged unpatentability over claims 1, 4 and 6 of Lee *et al.*, U.S. Patent No. 6,479,928. In paragraph 13 of the Office action, the Examiner stated that claims 18-31 were objected to for dependency upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. For the reasons stated below, it is submitted that the invention recited in the claims, as now amended, is distinguishable from the prior art cited by the Examiner so as to preclude rejection under 35 U.S.C. §102 or §103.

Independent claim 1 is being amended so as to improve its form and to recite the invention in a manner distinguishable from the prior art. As recited in claim 1, the filter layer of the present invention includes oxide particles and nano-sized metal particulates

coated on and adhered to a surface of the oxide particles so as to form a corresponding interface therebetween. In contrast, Hanak '215 discloses light-absorbing metal particles distributed in an inorganic light-transmitting medium, whereas Chigusa '974 discloses only a conductive anti-reflection film comprising a second layer containing silicon dioxide and conductive particles.

Furthermore, the present invention demonstrates a surface plasma resonance phenomenon at the interface between the oxide particles and the nano-sized metal particulates. Specifically, the surface plasma resonance phenomenon is induced at the interface of the oxide layer and the metal layer to selectively absorb light with predetermined wavelengths. Thus, because the filter layer includes particulates, interfaces in which the surface plasma resonance phenomenon is to be induced are larger in the filter layer than in a filter consisting of a medium state (as in Hanak '215) or in an anti-reflection film consisting of conductive particles in a silicon dioxide matrix (as in Chigusa '974). Accordingly, in the invention, the surface plasma resonance phenomenon is greatly exhibited, whereas in the arrangement of the cited references, the phenomenon is not triggered or exhibited.

With respect to the process of claim 7, the prior art does not disclose the combination of steps recited in the claim, specifically: dispersing an oxide in water to form an oxide sol; adding a metal salt, a reducing agent, and a dispersing agent to an

organic solvent to prepare a metal colloid solution; mixing the oxide sol with the metal colloid solution to prepare a coating solution with a metal colloid of the metal colloid solution being dispersed in the oxide sol; applying the coating solution on a face panel of a display to form a filter layer; and drying the filter layer at room temperature. As a result of the unique combination of steps, a film layer in which the surface plasma resonance phenomenon is triggered is formed, and such a filter layer is not found in the prior art.

With respect to independent claim 9 and its associated dependent claims, it is noted that, whereas independent 9 was rejected under 35 U.S.C. §102 for alleged anticipation by Chigusa '974 A1, dependent claims 10 thru 12 were not rejected based on prior art, but were rejected for alleged double patenting based on Lee *et al.* '928. Accordingly, independent claim 9 is being amended to include most of the recitations of dependent claim 10. That is to say, independent claim 9 is being amended to include all of the recitations of claim 10 except for the recitation that said at least one filter layer provides at least one selective absorption peak for "light at a corresponding predetermined wavelength of light by induction of the surface plasma resonance phenomenon at the corresponding interfaces between the nano-sized metal particulates and the oxide particles". The latter recitation, appearing in quotation marks, has been retained in dependent claim 10.

As a result of the amendment of independent claim 9, it is submitted that

independent claim 9 and its associated dependent claims are distinguishable from the prior art cited by the Examiner so as to preclude rejection under 35 U.S.C. §102 or §103.

Thus, only the rejection of claims 9 thru 12 for alleged double patenting should remain. With respect to that rejection, it is submitted that the invention recited in independent claim 9 and associated dependent claims 10 thru 12 is distinguishable from the invention recited in claims 1, 4 and 6 (cited by the Examiner) of Lee *et al.* '928. Specifically, Lee *et al.* '928 does not claim “a surface plasma resonance phenomenon being triggered at corresponding interfaces of the nano-sized metal particulates and the oxide particles to selectively absorb light at least at one predetermined wavelength of light” as recited in claim 9. Furthermore, Lee *et al.* '928 does not claim that “at least one phosphor layer provides at least one selective absorption peak for light at a corresponding predetermined wavelength of light by induction of the surface plasma resonance phenomenon at the corresponding interfaces between the nano-sized metal particulates and the oxide particles” as recited in claim 10 of the present application.

On the latter basis, it is respectfully submitted that independent claim 9 and associated dependent claims 10 thru 12 are no longer properly rejected for alleged double patenting based on Lee *et al.* '928.

Dependent claims 18, 23, 26 and 29 are being amended to appear in independent

form. Since the Examiner indicated (in paragraph 13 of the Office action) that claims 18 thru 13 are merely objected to for dependency upon a rejected base claim, but would be allowable if rewritten in independent form, immediate allowance of independent claims 18, 23, 26 and 29 (and their associated dependent claims) should be forthcoming.

Finally, corrected Figure 6 of the drawing is being submitted with this Amendment. Specifically, Figure 6 is being corrected so as to change one of the reference numerals "50a" to "50b", thereby achieving consistency with the specification of the application. Entry of the accompanying corrected formal Figure 6 and confirmation of the entry in writing in the next Office action are respectfully requested.

In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

A fee of \$380.00 is incurred by the addition of four (4) independent claims in excess of total 4 and two (2) total claims in excess of total 33. In addition, a fee of \$110.00 is incurred by the filing of a Petition of a one month extension of time. Applicant's check in the total amount of \$490.00 drawn to the order of Commissioner accompanies this Amendment. Should the check become lost, be deficient in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,



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